

**April 2000**

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Building 134, P.O. Box 5000  
Upton, NY 11973  
Phone: 631 344-2345 Fax: 631 344-3654  
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## Secretary of Energy Bill Richardson Visits Lab



- On March 31, Bill Richardson attended a ribbon cutting to celebrate the installation of three fuel cells at the Lab.
- DOE, the Lab, Long Island Power Authority, Plug Power and NYS Energy Research and Development Administration partnered to test the performance and potential of fuel cells as a viable power-generation option.

## Environment-Friendly Grout

- A grout developed by Brookhaven scientists was credited with reviving the geothermal heat pump industry in northern New Jersey.
- Geothermal heat pumps heat and cool buildings without burning fossil fuels. Instead, water-filled pipes draw heat from or dump heat into the ground.
- The boreholes housing the pipes, however, can channel surface runoff contaminants directly into groundwater if the grout surrounding the pipes cracks or shrinks.
- The grout developed at Brookhaven forms a tight, crack- and shrink-resistant seal, and also improves the transfer of heat.

## Lab Employees Help Boy Scouts Earn Atomic Energy Merit Badges

- In October and March 4, the Lab conducted sessions for Suffolk County Boy Scouts to earn the Atomic Energy Merit Badge.
- The Lab had an overwhelming response, with 173 Boy Scouts earning the badge. Seventy scouts are waiting to attend our next session.
- George Fleckenstein of the Suffolk County Boy Scout Council was very enthused about the program and Brookhaven's sponsorship.



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## Enhancing the Quality of Oils in Several Crops

- As a member of the Oilseed Engineering Alliance, Brookhaven will perform basic scientific investigations that may lead to the development of improved soybean, canola, and sunflower crops, and the potential for using oils from these crops to make industrial products.
- John Shanklin, Brookhaven's principal researcher, said, "There is no waste produced in the process, so using plant materials for making industrial products will be beneficial for the environment. This research may help to solve the problem of the world's limited resources."
- Each Alliance researcher brings specific expertise and skills to the project. John Ohlrogge, a member of the project's coordinating university, Michigan State, said, "We wanted to get the best available people in the world..."

## "Biological Blowtorch" has Far-reaching Potentials

- A team of researchers at the Lab determined the atomic structure of a key enzyme they call "the biological equivalent of a blowtorch," because the enzyme is so highly reactive with so many organic compounds.
- This research is the first step in analyzing a class of enzymes that may be used to shut down estrogen synthesis to treat cancer; eat up toxic chemicals such as PCBs; and to make epoxies in environmentally friendly, energy-efficient ways.

## Building Better Batteries

- Brookhaven National Laboratory and Gould Electronics, Inc. are partnering to create more efficient, more environmentally friendly batteries.
- Developed about a decade ago, light-weight and rechargeable lithium-ion batteries are used in laptop computers and cellular phones, and they will most likely be the battery of choice for electric cars in the future.
- By using Brookhaven's unique facility, the National Synchrotron Light Source, researchers are confident they can make a better battery by precisely pinpointing problems that need to be addressed.

## Comment Period for Peconic River Cleanup Extended

- The public comment period for "Operable Unit V," which includes the Peconic River, was extended until May 15, 2000.
- Comments on the Proposed Remedial Action Plan may be sent to the Department of Energy, Brookhaven Office, Upton, NY 11973. For more information, see <http://www.oer.dir.bnl.gov>

## Upcoming Events

### Concerts and Lectures at Berkner Hall

- April 5, noon, piano soloist Nnenna Ogwo
- April 30, 8 p.m., pianist Jacques Després

### Earth Week Activities

The public is invited to participate in the 30<sup>th</sup> anniversary celebration of Earth Day at Brookhaven Lab's Berkner Hall.

### Event Highlights

#### ***April 15 – Birding Field Trips, 7 a.m. and 12:30 p.m.***

The Lab and Moriches Bay Audubon Society will host two birding field trips in the Pine Barrens. Experienced birders will lead teams of up to seven people. Pre-register by April 12 by contacting Tim Green, 631 344-3091.

#### ***April 18 – Pollution Prevention Speaker, noon***

Robert Pojasek is a technical expert who focuses on helping industry plan and implement programs for energy efficiency, water conservation and pollution prevention. He will speak on zero waste generation.

#### ***April 18 – Pine Barrens Speaker, 7:30 p.m.***

John Turner, a co-founder of the L.I. Pine Barrens Society, will speak on the Pine Barrens. He authored *Exploring the Other Island*, a seasonal nature guide to Long Island, and *Waylons Wandering Water Drop*, a children's book that explains water cycles.

#### ***April 22 – Four-Mile Race, pre-registration from 7:30-9:30 a.m., race at 10 a.m.***

- A four-mile race and a ½ mile "fun run" for children under 12 will take place on the Lab's Pine Barrens trails. Entry forms and fee information are on the Web at [http://www.esh.bnl.gov/esd/earth\\_run.html](http://www.esh.bnl.gov/esd/earth_run.html). For more information, call Peter Pohlot at 631 344-5660.
- The day includes activities for children such as: a ½ mile fun race, face painting, a recycling race and making pine cone bird feeders.

#### ***April 22 – Mountaineering Slide Show, 1 p.m.***

The Lab's Mountain & Canoe Club will present a slide show on alpine mountaineering in Peru by Douglas Zimmerman.

For more information, see [www.esh.bnl.gov/esd/](http://www.esh.bnl.gov/esd/)